

column, on page 309. We do not use pit gages in ordinary work; they have only been used in several cases at stations at which experiments were in progress as to the decrease in the amount collected at different altitudes, but they have never been used at ordinary rainfall stations. Our standard gages have their orifices 1 foot above the natural level of the soil; there is no pit and no protection. An engraving illustrating this matter is given in the "Instructions to Observers," at the end of nearly every annual volume of British Rainfall. We adopted 1 foot chiefly to avoid in-splashing from surrounding soil. Every one did not surround his gage with grass, and we found garden mould in the bottles.

I heartily endorse the Editor's remarks as to the evil of moving old-established gages. Observers little know the harm that they may thus do.

I would plead for the establishment, in the United States, of more gages at, or near, the ground level. In Great Britain the rainfall records are largely used by engineers, they want to know what reaches the ground, not what can be caught on a roof 100 feet above it. Cannot the Weather Bureau secure such records in parks within cities and at agricultural stations. Will not the MONTHLY WEATHER REVIEW and the annual reports indicate which records belong to gages on the roofs and which to those on the ground, as this distinction is one of great importance?

MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Manuel E. Pastrana, Director of the Central Meteorologico-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the Boletín Mensual. An abstract, translated into English measures, is here given, in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.

Mexican data for October, 1899.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
Cullacán Rosales (E. d. S.)	113	29.69	97.7	63.5	81.9	57	0.69	ne.	ne.
Durango (Seminario)	6,243	24.05	87.5	43.2	64.2	59	2.12	sw.	e.
Leon (Guanajuato)	5,934	24.81	84.2	37.3	64.4	62	1.18	se.	se.
Mexico (Obs. Cent.)	7,472	23.08	78.1	37.0	59.9	64	0.81	ne.	ne.
Morelia (Seminario)	6,401	23.98	79.3	43.7	56.7	77	1.88	w.	w.
Puebla (Col. Cat.)	7,113	23.88	78.4	39.7	63.1	84	2.39	ene.	nw.
Saltillo (Col. S. Juan)	5,899	26.39	78.1	44.6	65.5	80	5.79	s.	sw.
San Isidro (Hac. de Guanajuato)	...	...	83.8	59.9	...	...	2.61	...	...
Silao	6,063	24.28	77.9	47.3	66.7	62	1.44	ese.	w.

OBSERVATIONS AT HONOLULU.

Through the kind cooperation of Mr. Curtis J. Lyons, Meteorologist to the Government Survey, the monthly report of meteorological conditions at Honolulu is now made partly in accordance with the new form, No. 1040, and the arrangement of the columns, therefore, differs from those previously published.

Meteorological observations at Honolulu, October, 1899.

The station is at 31° 18' N., 157° 50' W.
Pressure is corrected for temperature and reduced to sea level, and the gravity correction, -0.06, has been applied.
The average direction and force of the wind and the average cloudiness for the

whole day are given unless they have varied more than usual, in which case the extremes are given. The scale of wind force is 0 to 12, or Beaufort scale. Two directions of wind, or values of wind force or amounts of cloudiness, connected by a dash, indicate change from one to the other.

The rainfall for twenty-four hours has always been measured at 7:30 p. m., not 1 p. m., Greenwich time, on the respective dates.

The rain gage, 8 inches in diameter, is 1 foot above ground. Thermometer, 9 feet above ground. Ground is 43 feet, and the barometer 50 feet above sea level.

Date.	Pressure at sea level.	Temperature.		During twenty-four hours preceding 1 p.m. Greenwich time, or 2:30 a. m., Honolulu time.								Total rainfall at 9 a. m. local time.	
				Temperature.		Means.		Wind.		Average cloudiness.	Sea-level pressures.		
		Dry bulb.	Wet bulb.	Maximum.	Minimum.	Dew-point.	Relative humidity.	Prevailing direction.	Force.		Maximum.		Minimum.
1.....	29.96	73	69.5	88	70	65.7	72	ne.	3	4	30.04	29.95	0.08
2.....	29.96	75	69	84	73	67.7	72	ne.	1-3	6	30.02	29.93	0.00
3.....	29.98	74	71	85	75	66.7	67	ene.	3	4	30.05	29.95	0.08
4.....	30.02	75	68.5	83	73	68.0	72	ne.	4	9	30.08	29.98	0.01
5.....	30.05	76	68	84	75	65.0	64	ne.	4	1	30.08	29.99	0.00
6.....	30.04	74	67	84	73	68.5	62	ne.	3	1	30.09	30.00	0.00
7.....	29.98	71	67	83	74	64.0	64	ene.	3	5	30.06	29.95	0.00
8.....	29.91	70	67	84	73	65.5	68	ne-sw.	1	3-8	29.97	29.89	0.00
9.....	29.91	70	65	82	68	67.0	68	s.	1	4-8-0	29.95	29.87	0.00
10.....	29.92	73	67	85	64	68.5	64	e.	1-3	1	29.95	29.88	0.00
11.....	29.98	71	66.5	83	70	62.5	63	e-n.	1	7-2	29.95	29.85	0.00
12.....	29.95	73	69.5	83	71	65.3	70	se.	2	4-10	29.93	29.83	0.12
13.....	29.97	74	72	77	71	70.0	66	e-s.	3	10	29.94	29.81	0.08
14.....	29.94	71	69.5	83	74	70.3	62	s.	2	10-3	29.96	29.89	0.00
15.....	29.93	75	69	85	71	68.0	73	e-ne.	3-0	5	29.99	29.90	0.00
16.....	29.96	75	66.5	84	75	65.7	66	e-ne.	1-3	3	30.00	29.91	0.00
17.....	30.00	75	66.5	83	74	68.7	61	ne.	3-6	4	30.03	29.94	0.04
18.....	30.00	73	67.5	82	71	68.7	61	ne.	5-6	4	30.07	29.97	0.40
19.....	29.91	70	67.5	79	70	65.5	72	ene.	4-2	6	30.03	29.91	0.70
20.....	29.87	71	68.5	79	69	65.0	74	nne.	2	8	29.97	29.87	0.38
21.....	29.87	72	70	77	70	68.0	82	nne.	2-4	8	29.93	29.85	1.40
22.....	29.98	74	68.5	77	70	69.0	85	ne.	6-2	5	29.97	29.87	0.19
23.....	29.95	74	68	80	71	65.7	70	ne.	4	4	30.00	29.91	0.01
24.....	29.97	74	66.5	81	73	65.0	67	ne.	4	2	30.03	29.93	0.00
25.....	29.95	74	69	79	71	62.5	64	ne.	2	5	30.02	29.95	0.10
26.....	30.02	75	67	78	72	67.0	75	ne.	6-2	8	30.04	29.94	0.08
27.....	30.06	74	66	80	73	64.0	65	ene.	6-2	8	30.10	30.00	0.07
28.....	30.04	72	65.5	80	72	61.7	63	ene.	5	8	30.11	30.03	0.05
29.....	30.01	72	65.5	78	69	62.0	65	ne.	4	6-3	30.08	29.98	0.00
30.....	29.99	69	67	80	72	63.5	65	ne.	3	3	30.04	29.94	0.02
31.....	30.00	69	65.5	78	68	65.0	78	ne-n.	1-0	8	30.05	29.95	0.28
Sums.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.04
Means.....	29.96	72.9	67.5	81.4	71.5	65.5	70.7	.....	2.9	6.5	30.02	29.92	....
Departure..	+0.05	.....	.....	.....	.....	-0.7	-1.0	.....	.....	+1.2	.....	.....	+1.56

Mean temperature for October, 1899 (6+2+9), +3=75.7°; normal is 76.8°. Mean pressure for October (9+3)+2=29.97; normal is 29.966.

*This pressure is as recorded at 1 p. m., Greenwich time. †These temperatures are observed at 6 a. m., local, or 4:30 p. m., Greenwich time. ‡These values are the means of (6+9+2+9)+4. §Beaufort scale.

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently arrived in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

Das Wetter. Berlin. 16 Jahrgang.

Bebber, von, W. J. Wissenschaftliche Grundlage einer Wettervorhersage auf mehrere Tage voraus, insbesondere im Interesse der Landwirtschaft. P. 217.

Meinardus, W. Ueber die Nothwendigkeit hydrographischer Studien im nordatlantischen Ocean zum Verständniss der meteorologischen Erscheinungen im nordalpinen Europa. P. 222.

Davis, W. M. Die Cirkulation der Atmosphäre. (Fortsetzung.) P. 228.

Weise, — Wolkenbildung, Regen und Wald. (Schluss.) P. 233. *Philosophical Magazine. London. Vol. 48.*

Chattock, A. P. Velocity and Mass of the Ions in the Electric Wind in the Air. P. 401.

Bulletin American Geographical Society. New York. Vol. 31.

Ward, R. De C. Acclimatization of the White Man in the Tropics. P. 367.